

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:  
Fish et al.

Serial No.: 10/731,079

Confirmation No.: 3767

For: METHOD OF JOINING DATA  
AND ITS METADATA USING  
DYNAMIC METADATA IN  
RELATIONAL DATABASE

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Filed: December 9, 2003

Group Art Unit: 2164

Examiner: Cory C. Bell

MAIL STOP APPEAL BRIEF - PATENTS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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September 28, 2007  
Date

/John C. Garza/  
John C. Garza

Dear Sir:

**APPEAL BRIEF**

Applicants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2164 dated April 2, 2007, finally rejecting claims 1-2, 4-13 and 15-20. The final rejection of claims 1-2, 4-8, 12-13 and 15-20 is appealed. This Appeal Brief is believed to be timely since it is transmitted by the due date of October 2, 2007, as set by the filing of a Notice of Appeal on August 2, 2007.

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### **Real Party in Interest**

The present application has been assigned to International Business Machines Corporation, Armonk, New York.

### **Related Appeals and Interferences**

Applicant asserts that no other appeals or interferences are known to the Applicant, the Applicant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **Status of Claims**

Claims 1-2, 4-13 and 15-20 are pending in the application. Claims 1-20 were originally presented in the application. Claims 3 and 14 have been canceled without prejudice. Claims 1-2, 4-13 and 15-20 stand finally rejected as discussed below. The final rejections of claims 1-2, 4-8, 12-13 and 15-20 are appealed. The pending claims are shown in the attached Claims Appendix.

### **Status of Amendments**

All claim amendments have been entered by the Examiner, including amendments to the claims proposed after the final rejection.

## Summary of Claimed Subject Matter

Claimed embodiments include methods (see claims 1-2, 4-11), computer programs stored on computer readable media (see claims 12-13, 15-16), and systems (see claim 44) providing annotation information for a set of data. More specifically, embodiments provide methods, systems, and articles of manufacture for retrieving and returning annotation data for a variety of different type (*i.e.*, heterogeneous) data objects. While annotations for different type data objects may have varying types and numbers of annotation fields, the annotation data contained therein may be consolidated and returned in a uniform annotation data structure (*e.g.*, having a fixed number of fields) used for all types of annotations. For some embodiments, the annotation data structure may contain the consolidated annotation data, as well as a linking value identifying the corresponding annotated data. *See Application*, page 6, lines 2-10; *Abstract*. For a description of the physical environment of the invention, see *Application*, p. 7-10, for a description of the software environment of the invention, see *Application*, p. 10-11, and for a description of methods for retrieving and returning annotation data, see *Application*, p. 11-12.

### A. CLAIM 1 - INDEPENDENT

A method for providing annotation information for a set of data. *See Application*, page 4, lines 1-8. As claimed, the method includes querying an annotation store to retrieve one or more annotation records, each annotation record associated with a portion of the set of data and having one or more annotation fields, wherein the set of data is a relational table containing query results. *See Application*, page 10, line 1 – page 11, line 17; FIGS. 2A-2B. The method also includes generating a linking value identifying the portion of the set of data associated with the annotation records. *See Application*, page 12, lines 6-22; FIGS. 4A-4B. The method also includes consolidating data contained in the annotation fields. *See Application*, page 11, line 19 – page 13, line 2; FIGS. 4A-4B. The method also includes returning an annotation data structure comprising a field containing the linking value and a field containing the consolidated

data. See *Application*, page 12, line 23 - page 13, line 18; FIGS. 4A-4B. The method also includes joining the annotation data structure with the set of data using the generated linking value. See *Application*, page 13, lines 19-24; FIGS. 4A-4B.

**B. CLAIM 12 - INDEPENDENT**

A computer-readable storage medium containing a program for returning annotation data. See *Application*, page 4, lines 18-26. As claimed, the program contained in the computer readable medium includes querying an annotation store to retrieve one or more annotation records, each annotation record associated with a portion of the set of data and having one or more annotation fields, wherein the set of data is a relational table containing query results. See *Application*, page 10, line 1 – page 11, line 17; FIGS. 2A-2B. The program contained in the computer readable medium also includes generating a linking value identifying the portion of the set of data associated with the annotation records. See *Application*, page 12, lines 6-22; FIGS. 4A-4B. The program contained in the computer readable medium also includes consolidating data contained in the annotation fields. See *Application*, page 11, line 19 – page 13, line 2; FIGS. 4A-4B. The program contained in the computer readable medium also includes returning an annotation data structure comprising a field containing the linking value and a field containing the consolidated data. See *Application*, page 12, line 23 - page 13, line 18; FIGS. 4A-4B. The program contained in the computer readable medium also includes joining the annotation data structure with the set of data using the generated linking value. See *Application*, page 13, lines 19-24; FIGS. 4A-4B.

**C. CLAIM 17 - INDEPENDENT**

A system for providing annotation information for a set of data comprising a relational table containing query results. See *Application*, page 4, line 27 – page 5, line 6. As claimed, the system includes an annotation database for storing annotation records containing annotation data. See *Application*, page 10, line 1 – page 11, line 17; FIGS. 2A-2B. The system also includes an executable component configured to query the annotation store to retrieve one or more annotation records, each annotation record



associated with a portion of the set of data and having one or more annotation fields, generate a linking value identifying the portion of the set of data associated with the annotation records, consolidate data contained in the annotation fields, return an annotation data structure comprising a field containing the linking value and a field containing the consolidated data, and join the consolidated annotation data structure with the set of data using the generated linking value. See *Application*, page 11, line 19 - page 13, line 24; FIGS. 4A-4B.

### **Grounds of Rejection to be Reviewed on Appeal**

1. Rejection of claims 1, 2, 4, 7-8, 12-13 and 15-20 under 35 U.S.C. 102(e) and 35 U.S.C 102(a) as being anticipated by *Bays* (U.S. Patent No. 6,519,603, hereinafter *Bays*).
2. Rejection of claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over *Bays* as applied to claims above, and in view of official notice.

## **ARGUMENTS**

### **1. Claims 1, 2, 4, 7-8, 12-13 and 15-20 are not anticipated by *Bays* under 35 U.S.C. § 102(a) and 35 U.S.C. § 102(e).**

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In this case, *Bays* does not teach each and every element of the claims. For example, *Bays* does not teach or suggest "consolidating data contained in the annotation fields" and "returning an annotation data structure comprising a field containing the linking value and a field containing the consolidated data," as recited in independent claims 1, 12 and 17. As illustrated in Figures 4A-4B and described in paragraphs [0040-0042] of the present application, returning an annotation data structure (item 430) comprising generated linking values (items 426) and fields containing consolidated data (items 428), as claimed, allows annotations that would conventionally appear on multiple rows of data results to be consolidated into a single row of data results. For example, the two annotations included in the rows 424<sub>1</sub> and 424<sub>2</sub> shown in Figure 4A may be consolidated into a single field of row 428<sub>1</sub> shown in Figure 4B. In contrast, there is no teaching of consolidating annotations into one field in *Bays*, or any similar type of consolidation of annotations at all.

In the *Advisory Action* dated 6/27/2007, the Examiner appears to concede that *Bays* does not teach consolidated annotations returned in a field, stating "... if applicant intends consolidation to be used in this manner the applicant should amend the claims

to include consolidating the annotation information into a single field.” Applicants respectfully submit that independent claims 1, 12 and 17 recite “a field containing the consolidated data,” clearly indicating a single field.

Further, Applicants respectfully submit that *Bays* does not teach or suggest generating a linking value identifying the portion of the set of data associated with the annotation records, and joining the annotation data structure with the set of data using the generated linking value, as recited in independent claims 1, 12 and 17.

In the *Final Office Action* dated 4/2/2007, the Examiner argues that “generating a linking value identifying the portion of the set of data associated with the annotation records” is disclosed by *Bays*, Col. 3, Lines 48-53, which states:

For annotation entry, an annotatable data item is chosen (e.g. a 5th cell in column y of spreadsheet z) and an annotation is entered and stored. The annotation is associated with the annotatable data item at the time of entry by including pointer information to the annotatable data item with the annotation.

Here, the Examiner argues that the recited “linking value” is disclosed by the “pointer information” described in *Bays*. Applicants respectfully point out that, as described in the above citation, *Bays* teaches that the pointer information is included in the annotation “*at the time of entry*” of the annotation. Thus, *Bays* does not teach generating a linking value for annotation records that are retrieved by querying an annotation store, as recited in the present claims.

Accordingly, Applicants submit claims 1, 12 and 17, as well as their dependents, are allowable and respectfully request withdrawal of these rejections.

**2. Claims 5 and 6 are not unpatentable over *Bays* as applied to claims above, and in view of official notice, under 35 U.S.C. § 103(a).**

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. See MPEP § 2142. To establish a *prima facie* case of obviousness three

basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one ordinary skill in the art to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP § 2143. The present rejection fails to establish at least the third criterion.

Claims 5 and 6 depend, directly or indirectly, on claims that are believed to be allowable, for reasons discussed above. Accordingly, Applicants submit these claims are also allowable and respectfully request withdrawal of this rejection.

## CONCLUSION

The Examiner errs in finding that:

1. Claims 1, 2, 4, 7-8, 12-13 and 15-20 are anticipated by *Bays*; and
2. Claims 5 and 6 are unpatentable over *Bays* and in view of official notice.

Withdrawal of the rejections and allowance of all claims is respectfully requested.

Respectfully submitted, and  
**S-signed pursuant to 37 CFR 1.4,**

/Randol W. Read, Reg. No. 43,876/

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Randol W. Read  
Registration No. 43,876  
Patterson & Sheridan, L.L.P.  
3040 Post Oak Blvd., Suite 1500  
Houston, TX 77056  
Telephone: (713) 623-4844  
Facsimile: (713) 623-4846  
Attorney for Appellant(s)

## CLAIMS APPENDIX

1. (Previously Presented) A method for providing annotation information for a set of data, comprising:
  - querying an annotation store to retrieve one or more annotation records, each annotation record associated with a portion of the set of data and having one or more annotation fields, wherein the set of data is a relational table containing query results;
  - generating a linking value identifying the portion of the set of data associated with the annotation records;
  - consolidating data contained in the annotation fields;
  - returning an annotation data structure comprising a field containing the linking value and a field containing the consolidated data; and
  - joining the annotation data structure with the set of data using the generated linking value.
2. (Original) The method of claim 1, further comprising returning the set of data with the annotation data structure.
3. (Canceled)
4. (Previously Presented) The method of claim 1, comprising joining the annotation data structure with the set of data prior to returning the annotation data structure.
5. (Original) The method of claim 1, wherein the linking value comprises primary key data.
6. (Original) The method of claim 5, wherein the primary key data comprises compound primary key data involving at least two fields.
7. (Original) The method of claim 1, further comprising receiving a query to retrieve the annotation data, the query identifying the portion of the set of data associated with the annotation records.

8. (Original) The method of claim 1, further comprising:  
receiving a query to retrieve the set of data; and  
issuing the query against a data source separate from the annotation store to retrieve the set of data.
9. (Original) A method for providing user data and corresponding annotation data, comprising:  
receiving, from a requesting entity, a query to return the user data;  
retrieving the user data from a data source;  
retrieving, from an annotation store, one or more annotation records associated with the one or more annotated portions of the user data;  
consolidating annotation data contained in the annotation records;  
joining the consolidated annotation data with the user data to generate a data structure containing the consolidated data; and  
returning, to the requesting entity, the generated data structure.
10. (Original) The method of claim 9, further comprising generating one or more linking values identifying the one or more annotated portions of the user data.
11. (Original) The method of claim 10, wherein the linking values are utilized in the joining.
12. (Previously Presented) A computer-readable storage medium containing a program for returning annotation data which, when executed by a processor, performs operations comprising:  
querying an annotation store to retrieve one or more annotation records, each annotation record associated with a portion of the set of data and having one or more annotation fields, wherein the set of data is a relational table containing query results;  
generating a linking value identifying the portion of the set of data associated with the annotation records;  
consolidating data contained in the annotation fields;  
returning an annotation data structure comprising a field containing the linking value and a field containing the consolidated data.



joining the annotation data structure with the set of data using the generated linking value.

13. (Previously Presented) The computer-readable storage medium of claim 12, wherein the operations further comprise returning the set of data with the annotation data structure.

14. (Canceled)

15. (Previously Presented) The computer-readable storage medium of claim 12, wherein the operations further comprise receiving a query to retrieve the annotation data, the query identifying the portion of the set of data associated with the annotation records.

16. (Previously Presented) The computer-readable storage medium of claim 12, wherein the operations further comprise:

receiving a query to retrieve the set of data; and  
issuing the query against a data source separate from the annotation store to retrieve the set of data.

17. (Previously Presented) A system for providing annotation information for a set of data comprising a relational table containing query results, comprising:

an annotation database for storing annotation records containing annotation data; and

an executable component configured to query the annotation store to retrieve one or more annotation records, each annotation record associated with a portion of the set of data and having one or more annotation fields, generate a linking value identifying the portion of the set of data associated with the annotation records, consolidate data contained in the annotation fields, return an annotation data structure comprising a field containing the linking value and a field containing the consolidated data, and join the consolidated annotation data structure with the set of data using the generated linking value.

18. (Original) The system of claim 17, wherein the executable component is further configured to return the set of data with the annotation data structure.
19. (Previously Presented) The system of claim 18, wherein the executable component is further configured to retrieve the set of data from a data source separate from the annotation store.
20. (Previously Presented) The system of claim 18, wherein the executable component is further configured to join the consolidated annotation data with the set of data, using the linking value, prior to returning the set of data with the annotation structure.

## EVIDENCE APPENDIX

None.

## RELATED PROCEEDINGS APPENDIX

None.